

ABSTRACT OF THE DISCLOSURE

Methods for improved adhesion of an optical coating to a polarizing film incorporated onto an optical-quality plastic construct are disclosed. Preferred methods include treating a surface of the film by mechanical and/or chemical means and applying an optical coating to the treated film for effecting a coated, polarized optical-quality plastic part. Such mechanical and chemical means include exposing the polarizing film to a caustic solution at a concentration greater than or equal to 10%, roughening the surface of the film in a uniform manner, and utilizing plasma exposure to peen the surface and then chemically modify it. A particularly preferred technique involves uniform physical roughening, namely, forming grooves having a substantially uniform direction substantially aligned with the axis of light absorption, exposing this roughened surface to a caustic solution having a concentration of 10% or greater, and then dipping the roughened surface into an overcoat solution and withdrawing it substantially perpendicular to the direction of the grooves.

15